



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,749	09/06/2006	Masafumi Hashimoto	SPL-06-1222	3421
35811	7590	07/22/2010	EXAMINER	
IP GROUP OF DLA PIPER LLP (US)			JACKSON, MONIQUE R	
ONE LIBERTY PLACE				
1650 MARKET ST, SUITE 4900			ART UNIT	PAPER NUMBER
PHILADELPHIA, PA 19103			1787	
			NOTIFICATION DATE	DELIVERY MODE
			07/22/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pto.phil@dlapiper.com

Office Action Summary	Application No.	Applicant(s)	
	10/591,749	HASHIMOTO ET AL.	
	Examiner	Art Unit	
	Monique R. Jackson	1787	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 30 June 2010.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 23-34 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 23-34 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/30/10</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 6/30/10 has been entered. Claims 23-34 are pending in the application. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 23-25, 27-31 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by JP2000-043211A (JP'211.) JP'211 teaches a polyimide film improved in adhesion while holding the thermal characteristics and electric/electronic characteristics of the polyimide film, a method for producing the same and a laminate formed from the film, wherein the polyimide film is formed from a precursor solution containing polyamic acid obtained from 2,3,3',4'-biphenyltetracarboxylic acid dianhydride and 4,4'-diaminodiphenyl ether (Abstract; Claims.) JP'211 teaches that the precursor solution is applied to or sprayed on one or both sides of a self-

supporting film formed by a casting method of a dope obtained from 3,3',4,4'-biphenyltetracarboxylic acid dianhydride and p-phenylenediamine and containing an imidating catalyst according to circumstances and the coated film is heat-treated to obtain a polyimide film improved in adhesion and having a tensile modulus and linear expansion coefficient as claimed (Entire document; particularly Abstract, Claims; Paragraphs 0020-0023.) JP'211 teaches that the improved adhesion surface treatment polyimide layer has a thickness of 0.1-1 microns and the self-supporting polyimide film or base has a thickness of 10-100 μm with examples having a thickness of about 25 microns (Claims 1-2; Paragraph 0023.) JP'211 teaches that a layered product can be formed by laminating a metallic foil via heat-resistant adhesives to one side of the improved polyimide film or by plating a metallic layer on the improved polyimide film (Claims 4-6.) JP'211 also teaches that a known organic additive compound and inorganic particle filler additive can be added to the polyamic acid solution for the improved adhesion surface treatment layer (Paragraphs 0016 and 0020; *wherein the Examiner takes the position that these additives read upon the broadly claimed “heat-resistant surface treatment agent”, further noting that the term replaced by asterisks in Paragraph 0016 appears to be an organic “coupling” compound.*)

Claim Rejections - 35 USC § 103

4. Claims 26, 32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'211 in view of Okamura et al or Shigeta et al or EP'075. The teachings of JP'211 are discussed above. Though JP'211 teaches an improved adhesion polyimide film formed from a precursor composition comprising the same dianhydride and diamine as instantly claimed wherein the composition may further comprise an organic compound or inorganic particle filler additives, JP'211 does not specifically teach that the organic compound is a titanate, aminosilane

or epoxysilane coupling agent as instantly claimed. However, it is well established in the art that the incorporation of a titanate or silane coupling agent into a polyimide precursor composition provides improved adhesion of the resulting polyimide film as discussed in prior office actions and particularly taught by Okamura et al or Shigeta et al or EP'075, with respect to silane coupling agents and wherein EP'075 specifically teach aminosilane coupling agents suitable for use in similar precursor compositions and final end uses as instantly claimed. Hence, one having ordinary skill in the art at the time of the invention would have been motivated to incorporate a conventional silane coupling agent, such as an epoxysilane or an aminosilane coupling agent which are known, obvious species of silane coupling agents utilized in the art, and more specifically utilizing an aminosilane coupling agent as taught by EP'075 or similar aminosilane given the predictable results and reasonable expectation of success.

Response to Arguments

5. Applicant's declaration and arguments filed 6/30/10 have been fully considered but they are not persuasive. With regards to Applicant's arguments and showing of "unexpected" results, the Examiner first notes that the majority of the claims are rejected under 35 U.S.C. 102(b) as being anticipated by JP'211 and hence the alleged "unexpected" results are not persuasive with regards to these claims. As for Claims 26, 32 and 34, the Examiner notes that the data provided by the Applicant is not commensurate in scope with the instant claims, fails to provide a showing with regards to the closest prior art, and/or fails to provide any "unexpected" results to overcome the obviousness rejection given that the incorporation of a silane coupling agent, particularly an aminosilane, into a polyimide precursor solution is known in the art to provide improved adhesion of the resulting polyimide film as evidenced by the cited references. Hence,

Applicant's data showing an increase in adhesion strength when incorporating the aminosilane coupling agent into the polyamic acid solution vs. not incorporating the aminosilane would have been expected and the Examiner takes the position that Claims 26, 32 and 34 would have been obvious over the teachings of JP'211.

6. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Applicant's submission of an information disclosure statement on 6/30/10 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 10:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Monique R Jackson/
Primary Examiner, Art Unit 1787
July 18, 2010